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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,910	03/03/2006	Jat Yuen Richard Liew	ELLAC-73328	7234

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EXAMINER

ERENCE, JAMES M

ART UNIT	PAPER NUMBER
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3635

MAIL DATE	DELIVERY MODE
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06/22/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/570,910	Applicant(s) LIEW ET AL.	
	Examiner JAMES FERENCE	Art Unit 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 7,8 and 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20090609</u> . | 6) <input type="checkbox"/> Other: _____ |

20060727

DETAILED ACTION

This is a first Office action on the merits following the Requirement for Restriction filed on 11/06/2009.

Election/Restrictions

Applicant's election with traverse of Invention I, including claims 1-11 and Species A, embodied by Figures 1 and 2, in the reply filed on 04/02/2010 is acknowledged. The traversal is on the ground(s) that no significant burden would be imposed by examination of all pending claims. This is not found persuasive because the burden has been previously established in the Requirement for Restriction (page 3, paragraph 2).

Claims 7 and 8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Claims 7 and 8 include limitations drawn to secondary members which are shown in Figures 6-8.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-18 are pending. Claims 7, 8 and 12-18 have been withdrawn. Therefore, claims 1-6 and 9-11 remain under consideration.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5)

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because they include the following reference character(s) not mentioned in the description: **“405” (Fig. 4b) and “1000” (Fig. 10).**

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version.

The marked-up copy must be clearly labeled as “Annotated Sheets” and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Specification

The disclosure is objected to because of the following informalities:

on page 7, last paragraph, second to last line, "cable 391" should be changed to, "cable 392";

on page 8, paragraph 1, last line, "as shown in Figure 4b" should be changed to, "as shown in Figure 4c"; and

on page 8, third paragraph, line 4, "comprising by the middle hinges" should be changed to, "comprising the middle hinges".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 1-11: Claim 1 recites the limitation "the two members" in line 5. There is insufficient antecedent basis for this limitation in the claim. Claims 2-11 depend, directly or indirectly upon claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Vaughan (US Patent No. 3,771,274).

Referring to claim 1: Vaughan provides a deployable structure comprising:

a plurality of pairs of hingeably connected members (4, 5, 6, 7, 8 and 9);

a first hinge element (2);

a second hinge element (1);

wherein two members (4 and 7) of each pair hingeably connected members are connected to the first and the second hinge elements respectively (4 is connected to 1; 7 is connected to 2; Fig. 12); and

wherein the first hinge element is capable of being stabilized for facilitating stabilization of the deployable structure into a deployed state, as best understood (as shown stabilized in Fig. 12).

It is noted that the limitation, "capable of being stabilized for facilitating stabilization of the deployable structure into a deployed state " is a statement of intended use of the claimed invention and must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Referring to claim 2: Vaughan further provides a central member (60; Fig. 12) wherein the first and second hinge elements are connected to different ends of the central member (as shown in Fig. 12); and

wherein one portion of the first hinge element is detachably connected to the central member (col. 7, lines 48-56) such that the first hinge element is stabilized when connected to the central member (as shown in Fig. 12).

Referring to claim 3: Vaughan further provides a fastening element (71) to fasten the first hinge element to the central member (as best shown in Fig. 14).

Referring to claim 4: Vaughan further provides three or more pairs of hingeably connected members (4 and 7; 5 and 8; 6 and 9; Fig. 12).

Referring to claim 5: Vaughan further provides wherein one of the two members in each pair of hingeably connected members is connected to the other member of said pair by at least one third hinge element (3; Fig. 12; 1 is connected to 2 via elements 4, 3 and 7).

Referring to claim 6: Vaughan further provides flexible elements (10, 11 and 12) connecting the third hinge elements (as shown in Fig. 12).

Referring to claim 9: Vaughan further provides wherein the hinge elements allow a single degree-of-freedom of movement (col. 2, lines 5-10; Fig. 12).

Referring to claim 10: Vaughan further provides wherein the members comprise tubes (col. 7, lines 31-32) and cables (col. 3, line 57).

Referring to claim 11: Vaughan further provides one or more energy stored devices (51) for facilitating deployment and/or folding of the deployable structure (as shown in Figs. 12 and 14).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES FERENCE whose telephone number is (571) 270-7861. The examiner can normally be reached on Monday - Thursday, 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on (571) 272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. F./
Examiner, Art Unit 3635

/Richard E. Chilcot, Jr./
Supervisory Patent Examiner, Art
Unit 3635